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DEPARTMENT OF DEFENSE

Materiel Distribution System Study

JOINT LOGISTICS COMMANDERS

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1 July 1978

VOLUME III, BOOK 1
OPTIMIZATION MODEL RUN INDEX

78 09 07 044

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INTRODUCTION

This book contains a chronological index description of the optimization model runs used by the study group to assist in the analyses. The index shows the sequential development of the modeling strategy, provides a benchmark for future analysis, and (in conjunction with the output of the model runs) traces the development of the analyses which led to the conclusions drawn by the study group.

Runs are described in terms of the input parameters and data which, when specified, define a problem to be solved by the optimization model. glossary of terms used is provided at the end of this appendix to assist in interpretation of the index.

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 0:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Ø for all Depots

Variable Costs - Historical Base Year Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

· All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 0:56

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - ∅ for all Depots

Variable Costs - ∅ for all Depots/Products

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:27

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard Low DOD Value

5. Depot Capacity - · Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles -13

Link Density -15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:16

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$5.547M for all Depots

Variable Costs - Standard High DOD Value

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles -13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:15

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$1.0M for all Depots

Variable Costs - Standard Low DOD Value

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:38

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$5.0M for all Depots

Variable Costs - Standard Low DOD Value

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:37

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$5.0M for All Depots

Variable Costs - Standard High DOD Value

5. Depot Capacity- Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

. Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:11

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$10.0M for all Depots

Variable Costs - Standard High DOD Value

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:11

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$50.0M for all Depots

Variable Costs - Standard High DOD Value

5. Depot Capacity - .Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

· Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:44

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$1.0M for all Depots

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles -13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

Expanded DSS - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:55

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$2.0M for all Depots

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - · Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

Expanded DSS - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 9:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$3.0M for all Depots

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:05

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$4.0M for all Depots

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - 'Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density -15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:23

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - \$5.0M for all Depots

Variable Costs - Historical Base Year - Preliminary Estimate

Depot Capacity - Historical Base Year - Preliminary Estimate
 Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 0:58

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

· Link Density - 15095

7. Depot Configuration

Discrete All Depots Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 0:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77 Scaled by a Factor of 0.5
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density -15095

7. Depot Configuration
Discrete
All Depots Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1 Run Site USAMSSA
- 2. Run Time (CPU) 0:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77 Scaled by a Factor of 2.0
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

· Link Density - 15095

7. Depot Configuration

Discrete
All Depots Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 10:34

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1 Run Site USAMSSA
- 2. Run Time (CPU) 9:53

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77 Scaled by a Factor of 0.5
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - · Historical Base Year - Preliminary Estimate

Burden Factors - Not Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 10:22

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77 Scaled by a Factor of 2.0
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate
Burden Factors - Not Applied
Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2 Run Time (CPU) 7:56

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Scaled by a Factor of 0.5

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration
Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 9:18

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Scaled by a Factor of 2.0

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:14

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year Scaled by a Factor of 2.0

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:16

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year Scaled by a Factor of 2.0
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Not Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 19:43

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - . Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 13622

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 11:50

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity- Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration
Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 22:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - .Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 13622

7. Depot Configuration Discrete All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run. Site USAMSSA
- 2. Run Time (CPU) 4:31

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 13

Link Density - 15095

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 21:12

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Outbound Historical Base Year Generated as of 6-9-77; Inbound Set to \emptyset
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Year

Variable Costs - Historical Base Year - Preliminary Year

5. Depot Capacity - Historical Base Year - Preliminary Year

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 13622

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 19:03

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density -13622

7. Depot Configuration
Discrete

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

All Depots Free to Open or Close

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:37

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

. Link Density - 13622

7. Depot Configuration
Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:03

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 52104

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:14

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 6-9-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 32

7. Depot Configuration
Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:33

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 29835

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:46

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 52104

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:23

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 29835

7. Depot Configuration
 Discrete
 All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:46

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Preliminary Estimate

Variable Costs - Historical Base Year - Preliminary Estimate

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 52104

7. Depot Configuration
Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 29835

7. Depot Configuration
Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) .2:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 29835

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:01

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 52104

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:03

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:26

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Outbound Historical Base Year Generated as of 8-8-77; Inbound Set to ∅
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:32

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77 Scaled by a Factor of 1.4
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

RUN # 44

A. GENERAL

- 1. Run. Site USAMSSA
- 2. Run Time (CPU) 4:01

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77 Scaled by a Factor of 1.5
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty -

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration
Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

Supersource - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:01

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 52104

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:11

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 29835

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:32

B. INPUT DATA

- 1. Supply Historical Year Base
- 2. Demand Historical Year Base
- 3. Transportation Rates Historical Year Base Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Year Base Revised 8-28-77

Variable Costs - Historical Year Base Revised 8-28-77

5. Depot Capacity - Historical Year Base - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

RUN # 48

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:02

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:47

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes (Scaled by a Factor of 0.5)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:00

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes (Scaled by a Factor of 0.75)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:17

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 9:21

B. INPUT DATA

- Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 12:35

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:27

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 29934

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

RUN # 55

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:40

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-8-77

Variable Costs - Historical Base Year Revised 8-8-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 24

Link Density - 33022

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 4:58

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 24

Link Density - 58068

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yex

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:55

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 56504

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 11:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-25-77

Variable Costs - Historical Base Year Revised 8-25-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 11:49

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Historical Base Year Revised 8-28-77

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:32

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77 Cluster Centroid
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:16

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77
Cluster Total Except Clusters 1,6&8 Reduced by 2/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27.

Link Density - 100%

7. Depot Configuration

12 Cluster

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:39

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 8-8-77 Cluster Centroid
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Variable Costs - Cluster Discrete

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Cluster Discrete

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:43

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters
- All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:35

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Cluster Discrete

5. Depot Capacity

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:35

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:20

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

RUN # 69

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:23

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate Burden Factors - Applied Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:14

B. INPUT DATA

- Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77
Cluster Total Except Clusters 1,6&7 Reduced by 2/3
Variable Costs -

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:18

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

- 7. Depot Configuration
 12 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:33

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Variable Costs - Standard

- 5. Depot Capacity Historical Base Year Preliminary Estimate Burden Factors - Applied Throughput Penalty - Used
- 6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:12

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:15

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77
Cluster Total Except Clusters 1,6&7 Reduced by 1/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:34

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77
Cluster Total Except Clusters 1,6&7 Reduced by 1/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Used Only for Clusters 11 & 12

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

· All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:13

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:49

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-14-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1,5 & 7 Reduced by 1/3 & Cluster 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Preliminary Estimate

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:42

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 (Weighted Throughput)

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:20

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:17

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 5:38

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 7:31

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 5:26

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Micro-Mix

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 7:03

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27
Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 6:48

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Micro-Mix

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75 Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 5:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close Except Depot 32 Locked Closed

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 5:14

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 8-8-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Pun Time (CPU) 1:53

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-28-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:16

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-28-77 Cluster Average
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75 Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

RUN # 91

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:00

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-28-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75 Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:11

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:18

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year Except Bundle 27 Scaled to Ø
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Escept Clusters 1 & & Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) -5:01

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75
Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 9:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - \$3.5M Per Depot in Each Cluster

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75 Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:49

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 8:34

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year Except Bundle 27 Scaled to \emptyset
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75

Burden Factors - Applied

Throughput Penalty - Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

· All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:43

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77 Scaled by a Factor of 1.75
Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:55

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Ø For All Clusters

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total
 Except Clusters 3 & 6 Reduced by 2/3 & Clusters 1,4 & 7 Reduced by 1/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 3:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - \$2.0M Per Depot in Each Cluster

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

RUN # 103

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:58

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - \emptyset for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

RUN # 104

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:45

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Reallocated on Basis of Weighted Throughput

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

24 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1.4 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity- Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Also Added to Inbound; Reduced Links Allowed to 323)

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:17

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1,4 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

· All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:54

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - ∅ for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:06

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1, 4 & 7 Reduced by 1/3 & Clusters 5 & Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters .All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Reduced Penalty Links Allowed to 323; Applied to Outbound Links Only for Remainder of Runs)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:40

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Micro-Mix

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Links Allowed - 323)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:34

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - \$3.5M for All Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Links Allowed - 323)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:17

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Micro-Mix

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Links Allowed - 323)

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:36

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes (Reduced Penalty Links Allowed to 206 for Remainder of Runs)

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 9-29-77
 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1, 4 & 7 Reduced by 1/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes.

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:36

B. INPUT DATA

- Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:01

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:15

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 9-29-77
- 4. Depot Cost

Fixed Costs - \$3.5M for All Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:25

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year (for Consumables Only)
- 3. Transportation Rates Historical Base Year
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density -100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:59

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year (for Consumables Only)
- 3. Transportation Rates Historical Base Year
- 4. Depot Cost

Fixed Costs - ∅ for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration
Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:27

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year (for Consumables Less Bundle 27)
- 3. Transportation Rates Historical Base Year
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:46

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity- Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Closre

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

Expanded DSS - Yes

ent - Izit out to il

- 1. Run · Site USAMSSA
- 2. Run Time (CPU) -

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77
Weighted Cluster Total
Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:14

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Weighted Cluster Total Except Cluster 6 Reduced by 2/3 & Clusters 1 & 7 Reduced by 1/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generaged as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Weighted Cluster

Total Except Cluster 1 & 4 Reduced by 1/3 & Clusters 5, 6, & 7 Reduced

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3, Clusters 5 & 6 Reduced by 2/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density -100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1, 4 &5 Reduced by 1/3 & Clusters 6 & 7 Reduced by 2/3 Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:36

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21
Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:01

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:36

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77
- 4. Depot Cost

Fixed Costs - \$2.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:14

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77
- 4. Depot Cost

Fixed Costs - \$2.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - No

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Weighted Cluster Total Except Clusters 1, 4, & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by Variable Costs - Standard

5. Depot Capacity- Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration 12 Clusters All Clusters Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 6:21

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-26-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Other marked No)

Double Handling - No

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:36

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:36

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77
Modified to Simulate Cluster Costs
Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:16

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:37

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77
Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Others marked No)

Double Handling - Yes

Customer Returns - Yes

- Run Site USAMSSA
- 2. Run Time (CPU) 2:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generaged as of 10-31-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Weighted Cluster Total Except Clusters 1, 4, & 7 Reduced by 1/3, Cluster 5 Reduced by 2/3 & Cluster 6 Reduced to \$1.6M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in effect marked Yes - Other marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 10-31-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3 & Clusters 5 & 6 Reduced by 2/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

7. Depot Configuration
12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- A. GENERAL (Not Used For Analysis Error in Specifying Input)
 - 1. Run Site USAMSSA
 - 2. Run Time (CPU) 2:16
- B. INPUT DATA
 - 1. Supply Historical Base Year
 - 2. Demand Historical Base Year
 - 3. Transportation Rates Historical Base Year Generated as of 10-31-77
 - 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Depots Free to Open or Close

8. Options (Those in effect marked Yes - Other marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:11

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 1 & 7 Reduced by 1/3, Cluster 5 Reduced by 2/3 & Cluster 6 Reduced by \$1.6M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty -Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total Except Clusters 5 & 7 Reduced by 2/3, Cluster 1 Reduced by 1/3 & Cluster 6 Reduced to \$1.6M

Variable Costs - Standard

5. Depot Capacity Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration 12 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:10

B. INPUT DATA

- 1. Supply Historical Base Year Scaled for Mobilization
- 2. Demand Historical Base Year Scaled for Mobilization
- 3. Transportation Rates Historical Base Year Generated as of 10-31-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total

Variable Costs - Standard

5. Depot Capacity Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

- 7. Depot Configuration
 12 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:11

B. INPUT DATA

- 1. Supply Historical Base Year Scaled for Mobilization
- 2. Demand Historical Base Year Scaled for Mobilization
- Transportation Rates Historical Base Year Generated as of 10-31-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3 & clusters 5 & 6 reduced by 2/3 Variable Costs - Standard

5. Depot Capacity (Historical Base Year Revised 9-25-77)

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration 12 Clusters All Clusters Free to Open or Close

3. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; cluster 5 reduced by 2/3; cluster 6 reduced to \$1.6M

Variable Costs - Standard

5. Depot Capacity (Historical Base Year Revised 9-25-77)

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:17

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity (Historical Base Year Revised 9-25-77)

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:37

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity Historical Base Year Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 21

Link Density - 100%

- 7. Depot Configuration
 Discrete
 All Depots Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:31

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:58

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

- 7. Depot Configuration
 12 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:55

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; cluster 5 reduced by 2/3; cluster 6 reduced to \$1.6M Variable Costs - Standard

5. Depot Capacity Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration
12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:03

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; cluster 5 reduced by 2/3; cluster 6 reduced to \$1.6M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration
12 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:06

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:29

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; cluster 5 reduced by 2/3; cluster 6 reduced to \$1.6M Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

12 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) Unavailable

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100%

7. Depot Configuration Discrete All Depots Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 3:51

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; Cluster 5 reduced by 2/3; Cluster 6 reduced to \$1.6M Variable Costs -

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 3:05

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average; Outbound Scaled by a factor of 0.6
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; Cluster 5 reduced by 2/3; Cluster 6 reduced to \$1.6M Variable Costs -

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:18

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average; Scaled by a factor of 1.5
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except clusters 1 & 7 reduced by 1/3; Cluster 5 reduced by 2/3; Cluster 6 reduced to \$1.6M Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

- 7. Depot Configuration
 15 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:24

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year; Scaled by a factor of 0.8
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except Clusters 1 & 7 reduced by 1/3; Cluster 5 reduced by 2/3; Cluster 6 reduced to \$1.6M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:08

B. INPUT DATA

- Supply Historical Base Year; Modified to reflect shift of supply sources
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except Clusters 1 & 7 reduced by 1/3; Cluster 5 reduced by 2/3; Cluster 6 reduced to \$1.6M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration 15 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:33

B. INPUT DATA

- 1. Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to reflect demand shift Scenario I
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #156

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:33

B. INPUT DATA

- 1. Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to reflect demand shift Scenario II
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #156

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:21

B. INPUT DATA

- 1. Supply Historical Base Year Scaled for Mobilization Scenario
- 2. Demand Historical Base Year Scaled for Mobilization Scenario
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #156

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:59

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77;
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except Cluster 1 reduced by 1/3 and Cluster 5 reduced by 2/3

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77
Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 & 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

- 7. Depot Configuration
 15 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:51

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost-

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster total except Cluster 1 reduced by 1/3 and Cluster 5 reduced by 2/3
Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 & 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:47

B. INPUT DATA

- 1. Supply Historical Base Year scaled for Mobilization Scenario
- 2. Demand Historical Base Year scaled for Mobilization Scenario
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77
Burden Factors - Applied
Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

Discrete All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 14:20

B. INPUT DATA

- Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to correspond to demand shift Scenario I
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:06

B. INPUT DATA

- 1. Supply Historical Base Year scaled for Mobilization Scenario
- 2. Demand Historical Base Year scaled for Mobilization Scenario
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total except Cluster 1 reduced by 1/3 and Cluster 2 reduced by 2/3
Variable Costs - Standard

5. Depot Capacity

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

- 7. Depot Configuration
 15 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:28

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total except Cluster 1 reduced by 1/3; Cluster 5 reduced by 2/3; and Cluster 15 reduced to \$5.5M

Variable Costs - Standard

5. Depot Capacity

Burden Factors - Historical Base Year - Revised 9-25-77

Throughput Penalty - Applied

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close except Clusters 6 & 13 are locked closed

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:22

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year Revised 8-28-77; Cluster Total except Cluster 1 reduced by 1/3 and Cluster 5 reduced by 2/3

Variable Costs - Nominal Case #1

5. Depot Capacity - Historical Base Year Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100 less edited links

- 7. Depot Configuration
 15 Clusters
 All Clusters Free to Open or Close
- 8. Options (Those in Effect Marked Yes Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:19

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #2

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not Used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:21

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #3

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:21

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #4

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Not used

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 7 & 13 are locked

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Cluster 15 is locked

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:44

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 9-25-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 13 & 15 are locked open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 3, 6, 11, 13 & 15 are locked closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:02

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 2, 3, 6, 11, 13 & 15 are locked closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:33

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170; except Clusters 2 & 3 reduced by 1/2

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:20

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Wage Grade Differential #1

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:03

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year scaled by a factor of 0.8
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170; except Cluster 2 &3 reduced by 1/2

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (those in effect marked yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:28

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Wage Grade Differential #1

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 & 12 only

6. Bundling Scheme

Bundles - 27

Link Density -100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:31

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Wage Grade Differential #1

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 6, 7, & 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:59

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Wage Grade Differential #1

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site GEICO
- 2. Run Time (CPU) 7:55

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Revised 8-28-77

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77
Burden Factors - Applied
Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

Discrete
All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site GEICO
- 2. Run Time (CPU) 9:44

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Revised 8-28-77

Variable Costs - Micro-mix

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site GEICO
- 2. Run Time (CPU) 12:16

B. INPUT DATA

- Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - Historical Base Year - Revised 8-28-77

Variable Costs - Wage Grade Differential #1

5. Depot Capacity - Historical Base Year - Revised 11-30-77
Burden Factors - Applied
Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

Discrete All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:50

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; outbound freight conditions 1-5 scaled by a factor of 0.6; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:50

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; outbound freight conditions 1-15 scaled by a factor of 0.75; Cluster

4. Depot cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- Run Time (CPU) 2:44

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77; inbound scaled by a factor of 0.85; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:30

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links: Bundles 25, 26 & 27
excluded from Cluster 7

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:51

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links; special exclusions for overseas demand for aircraft engines

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:27

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:20

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 6 & 11 are locked closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

GENERAL Α.

- 1. Run Site USAMSSA
- Run Time (CPU) 2:27

INPUT DATA В.

- Supply Historical Base Year 1.
- Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77; 3. Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 & 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 6 & 11 are locked closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:19

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 & 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Clusters 6 & 11 are locked closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:57

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (Those in Effect Marked Yes - Others Marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) -3:32

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:04

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #5

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #6

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration.

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:25

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #6

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:26

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #5

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:43

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #7

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:04

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #7

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:45

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #8

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:06

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #8

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:40

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #9

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:00

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #9

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Locked Open

8. Options (those,in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:39

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Wage Grade Differential #1

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density -100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:21

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #11

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:39

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #11

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:39

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535; Army customers linked to DSS depot clusters only

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:59

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535; Bundle 27 linked to Cluster 3

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:58

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535; Bundle 27 linked to Cluster 4

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:40

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close; except Cluster 6 is Locked Closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as o∉ 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535; Links modified to include Cluster 13

7. Depot Configuration

12 Depots Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535; Links modified for Cluster 8

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:00

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:50

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links; special exclusion for aircraft engines to overseas customers

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #17

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #18

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #19

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #20

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Configuration

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #21

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #22

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #23

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:09

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #24

5. Depot Capacity -- Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 Only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:14

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 Only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:11

B. INPUT DATA

- Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 Only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those, in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:51

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #13

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 Only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:24

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #14

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 Only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Locked Open

8. Options (those, in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:24

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #15

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 Only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:10

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case #16

5. Depot Capacity - Historical Base Year - Revised 11-20-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:27

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

Bundle 27 linked to Cluster 3

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:29

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

Army Customers Linked to DSS Depot Clusters Only

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:26

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535

Links modified for Cluster 13

7. Depot Configuration

12 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:30

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case - B

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535 - From Run #231

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:07

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case - F

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535 - From Run #231

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case - D

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535 - From Run #231

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:08

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case - H

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (one link per bundle - customer)

Link Density - 5535 - From Run #231

7. Depot Configuration

11 Clusters Locked Open by Link Structure

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:38

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:30

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close Except Clusters 6 and 11 are Locked Closed

8. Options (those in effect marked yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:33

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Revised for Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 and 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Customers Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:13

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case - I

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:19

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Nominal Case - II

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open to Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:02

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Historical Base Year - Revised 8 -28-77 Cluster Total Except Cluster 1 Reduced by 1/3 & Cluster 5 Increased to \$6.2M Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:33

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year For Consumables Only
- 3. Transportation Rates Historical Base Year Generated as of 11-31-77
- 4. Depot Cost

Fixed Costs - \$1.0M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (used consumable bundles only)

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:56

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year For Consumables Only
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - \$2.0M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (used consumable bundles only)

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 4:58

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year for Consumables Only
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - \$2.5M for All Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Revised

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (used consumable bundles only)

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 5:02

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year For Consumables Only
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - \$3.5M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (used consumable bundles only)

Link Density - 100%

7. Depot Configuration

Discrete

All Depots Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

RUN # 253

A. GENERAL

- 1. Run Site USAMSSA
- Run Time (CPU) 5:02

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year For Consumables Only
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77
- 4. Depot Cost

Fixed Costs - \$5.0M for all Depots

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 (used consumable bundles only)

Link Density -100%

7. Depot Configuration

Discrete

All Depots Free to Open ot Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:06

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Scaled by Factor of 1.5; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density -100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Locked Open Except Clusters 6,11,13&15 are Locked Closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:06

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters

All Clusters Locked Open Except Clusters 6,11,13 & 15 are Locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 1:56

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

7. Depot Configuration

15 Clusters

All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 11:46

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Use for Clusters 7 and 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters .
All Clusters Free to Open or Close except Clusters 6 and 11 are Locked Closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 7:51

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 and 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Free to Open or Close except Clusters 6 and 11 are locked Closed and Cluster 13 is locked Open

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 17:30

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Revised For Sensitivity Analysis

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 and 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters .
All Clusters Free to Open or Close except Clusters 6 and 11 are locked Closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 13:54

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Except Cluster 13 Reduced to \$2.0M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 and 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Free to Open or Close except Clusters 6 and 11 are locked Closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 17:15

B. INPUT DATA

- 1. Supply Historical Base Year
- 2. Demand Historical Base Year
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Except Cluster 13 Reduced to \$3.0M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Clusters 7 and 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters .
All Clusters Free to Open or Close except Clusters 6 and 11 are locked Closed

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 3:03

B. INPUT DATA

- Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to reflect maintenance demand Scenario I
- 3. Transportation Rates Historical Base Year Generated as of 11-10-77; Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27 .

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:52

B. INPUT DATA

- Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to reflect maintenance demand Scenario II
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:53

B. INPUT DATA

- Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to reflect maintenance demand Scenario III
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters
All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

RUN # 265

A. GENERAL

- 1. Run Site USAMSSA
- 2. Run Time (CPU) 2:44

B. INPUT DATA

- Supply Historical Base Year; Modified to correspond to demand shift
- 2. Demand Historical Base Year; Modified to reflect maintenance demand Scenario III
- Transportation Rates Historical Base Year Generated as of 11-10-77;
 Cluster Average
- 4. Depot Cost

Fixed Costs - Same as Run #170

Except Cluster 2 Reduced to \$3.0M

Variable Costs - Standard

5. Depot Capacity - Historical Base Year - Revised 11-30-77

Burden Factors - Applied

Throughput Penalty - Used for Cluster 12 only

6. Bundling Scheme

Bundles - 27

Link Density - 100% less edited links

7. Depot Configuration

15 Clusters All Clusters Free to Open or Close

8. Options (those in effect marked Yes - others marked No)

Double Handling - Yes

Customer Returns - Yes

GLOSSARY OF TERMS

GENERAL

USAMSSA - US Army Management Systems Support Agency (IBM 370/165).

GEICO - Government Employees Insurance Company (IBM 370/168).

RUN TIME - expressed as minutes: seconds (Includes compile, link edit and go steps for optimization model plus an additional output step; the compile, link edit and output step accounted for approximately 20 seconds of the time shown.)

INPUT DATA

SUPPLY, DEMAND, TRANSPORTATION RATES AND DEPOT COST - self-explanatory.

DEPOT CAPACITY - maximum annual throughput for each depot expressed in units of weighted throughput.

BURDEN FACTORS - relative measures of difficulty applied to each product (difficulty factor).

THROUGHPUT PENALTY - assesses a specified \$ per unit of weighted throughput penalty for exceeding depot capacity.

BUNDLES - a partition of commodities with the understanding that if a customer is assigned to a depot for one commodity in a bundle, then the customer receives all products in that bundle from that depot.

LINK DENSITY - the number of bundle-customer-depot links allowed (100% indicates all bundle-customer combinations are permitted at each depot cluster in the scenario.)

DEPOT CONFIGURATION - depots were considered as discrete facilities or as clusters of facilities for model runs; the exact configuration is specified on each sheet.

DOUBLE HANDLING OPTION - a penalty applied (Yes) or not applied (No) for the collocated maintenance interface situation.

CUSTOMER RETURN OPTION - returns from customers allowed (Yes) or not allowed (No) to be a source of supply.

EXPANDED DSS OPTION - Overseas Army DSS customer demand routed via Army CCP (Yes) or not (No).

